REMARKS

The Examiner's Office Action of August 1, 2003 has been received and its contents reviewed. Applicants would like to thank the Examiner for the consideration given to the above-identified application.

By this Amendment, claims 6-8, 17-22, 25, and 49-77 have been amended, and new claims 82-85 have been added. Claims 1-5, 9-16, 23, 24, and 26-48 have been withdrawn from consideration. Accordingly, claims 6-8, 17-22, 25, 49-85 are pending for consideration, of which claims 6-8, 78 and 82 are independent. By the actions above and the remarks below, Applicants respectfully request reconsideration and allowance of all the pending claims.

Referring now to the detailed Office Action, the title of the invention is not considered descriptive of the claimed invention. In response, Applicants have amended the title of the invention, as shown above.

Claims 6-8, 17-22, 25, 49-81 stand rejected under 35 U.S.C. §103(a) as unpatentable over Ohtani et al. (U.S. Patent No. 5,643,826 – hereafter Ohtani). This rejection is respectfully traversed for the reasons provided below.

Ohtani appears to disclose a method of manufacturing a semiconductor device including coating the surface of an amorphous silicon film with a solution containing a catalyst capable of accelerating the crystallization of the amorphous silicon film and heat-treating the amorphous silicon film thereafter to crystallize the film.

As disclosed in, e.g., col. 12 and Figs. 10A-10B of Ohtani, an amorphous silicon film (203) is formed on a silicon oxide film (202). Thereafter, a silicon oxide film (205) is formed on the amorphous silicon film (203) and an opening (206) is provided on the silicon oxide film (205) amorphous silicon. Then a nickel-containing film is formed on the silicon oxide film (205) and the opening (206). Heat annealing is then performed at 500°-620° for 4 hours in nitrogen atmosphere to crystallize the amorphous silicon film. After the crystallizing step, the silicon oxide film (205) is removed. Then the crystallized silicon film (204) is patterned to form an active layer (208). Then the patterned active layer (208) is exposed to 100% aqueous vapor of 10 atm at 500°-600° for one hour to oxidize the surface to form silicon oxide film (209) and then the film is maintained in ammonium atmosphere at 400°. Thereafter, the silicon oxide film (209) is irradiated with an infrared light to nitride the silicon

oxide. The intensity of the infrared light is controlled so that the temperature on the surface of a crystalline silicon wafer is set between 900°-1200°.

In view of the above-summarized steps taught in Ohtani, Applicants respectfully submit that the Examiner improperly failed to take essential steps in the method of Ohtani into consideration in deciding the applicability of the reference. As such, the Examiner-cited steps have been taken out of context in the rejection, and the teaching of Ohtani have been misinterpreted.

In other words, although Ohtani and the presently claimed invention may have a common step, such as adding a metal element to an amorphous semiconductor film, for example, the method of Ohtani clearly does not suggest or disclose treating a warped layer or reducing warp in a semiconductor device as provided by the Examiner.

Further, Ohtani teaches patterning the crystallized silicon before a "second" heat treating, which is the heating treating with infrared light as asserted by the Examiner. On the other hand, as recited in, e.g., claim 78 of the present invention, the patterning (etching of the crystallized silicon film) is performed after the heating treating. Therefore, if the teaching of Ohtani were relevant to the presently claimed invention, it would still be unclear as to how the "second" heat treating using infrared light would or could decrease warp in the patterned crystallized semiconductor island of Ohtani, since the steps are different and there is absolutely no disclosure of warp created through laser irradiation followed by a heat treatment to decrease warp before patterning of the semiconductor film.

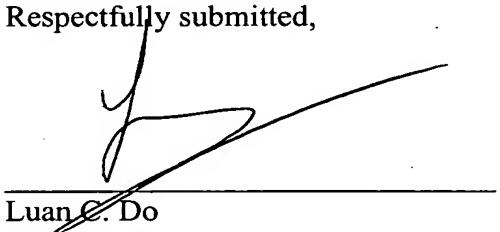
Should the Examiner maintain the §103(a) rejection, Applicants will request the Examiner to quote specific text in Ohtani to support the assertion that Ohtani discloses the problem of warping and the steps in lessening the problem and to explain how warping would occur in the various steps of manufacturing and which disclosed step would lessen the warping.

In view of the amendments and arguments set forth above, Applicants respectfully request reconsideration and withdrawal of all the pending rejection.

New claims 82-85 have been added to further complete the scope to which Applicants are entitled. Claims 6-8, 17-22, 25, and 49-77 have been amended to correct grammatical errors and to further clarify the claim language.

While the present application is now believed to be in condition for allowance, should the Examiner find some issue to remain unresolved, or should any new issues arise which could be eliminated through discussions with Applicants' representative, then the Examiner is invited to contact the undersigned by telephone in order that the further prosecution of this application can thereby be expedited.

Respectfully submitted,



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